

Ser. No. 10/651,091  
Response dated May 11, 2005  
Reply to Office Action of March 9, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claims 1-23. (canceled)

Claim 24. (currently amended) A method of providing real time traffic weighted routes using a navigation system having a route calculation program that uses a map database that includes road segment records that represent portions of roads in a road network in a geographic region, comprising the steps of:

receiving a wireless transmission indicating weightings applicable to roads in said road network, wherein the weightings indicate traffic conditions;

calculating a solution route between a first location in said geographic region and a second location in said geographic region, wherein said solution route comprises a list that includes a selection of said road segment records that was obtained by forming at least one search tree formed of a plurality of gates, wherein each gate represents a physical location on said road network and an accessible direction relative to said physical location;

identifying to which of said road segment records said weightings apply;

incrementing each of said gates in said at least one search tree that corresponds to a road segment record to which one of said weightings applies;

growing a search tree by expanding gates to form successor gates; and

evaluating which of said successor gates to select for further expansion using said weighted gates.

Claims 25-30. (canceled)

31. (previously presented) The method of Claim 24 wherein each gate identifies an associated road segment by referring to a segment database ID.

Ser. No. 10/651,091  
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32. (previously presented) The method of Claim 24 wherein each gate identifies an associated road segment with a pointer.

33. (previously presented) The method of Claim 24 wherein, in each gate, the accessible direction is reverse from a direction of vehicle travel.

34. (previously presented) The method of Claim 24 wherein each gate also includes a reference to a predecessor gate.

35. (previously presented) The method of Claim 24 further comprising: after calculating the solution route from the first location to the second location, augmenting an inbound search tree by adding thereto that portion of the at least one search tree that formed part of the solution route.

36. (previously presented) The method of Claim 35 further comprising: maintaining in a memory of the navigation system the inbound search tree as augmented with that portion of the at least one search tree that formed part of the solution route.

37. (previously presented) The method of Claim 24 further comprising: providing a user of the navigation system with guidance for following the solution route to the second location from a physical location of the navigation system.

38. (previously presented) The method of Claim 24 further comprising: prompting a user of the navigation system to indicate whether a new route should be calculated upon detection that the navigation system departed from the solution route.

Claim 39. (canceled)

40. (previously presented) The method of Claim 24 wherein the weightings are provided to the navigation system from a traffic monitoring service.

Ser. No. 10/651,091  
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Claims 41-44. (canceled)